VoiSmart®

Switch PoE

High Performance Communication

# NT-3010-02-24/2POE

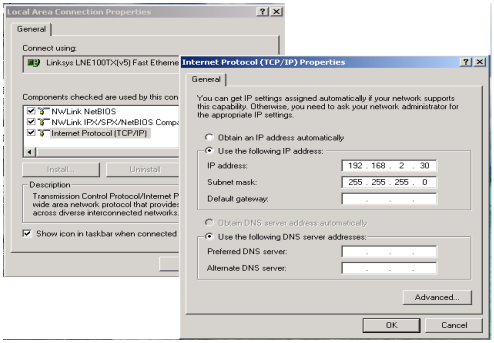
# User's Manual

## Web Smart Switch Configure

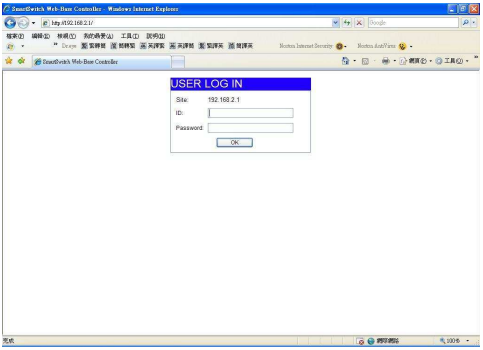
Please follow the steps to configure this Web Smart switch.

**Step 1:** Use a twisted pair cable to connect this switch to your PC.

**Step 2:** Set your PC's IP to 192.168.2.xx.


Local Area Connection Properties
General
Connect using:
Components checked are used by this con
NWLink NetBIOS
Internet Protocol (TCP/IP)
Install...
Uninstall
Description
Show icon in task bar when connected
Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address: 192 . 168 . 2 . 30
Subnet mask: 255 . 255 . 255 . 0
Default gateway:
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

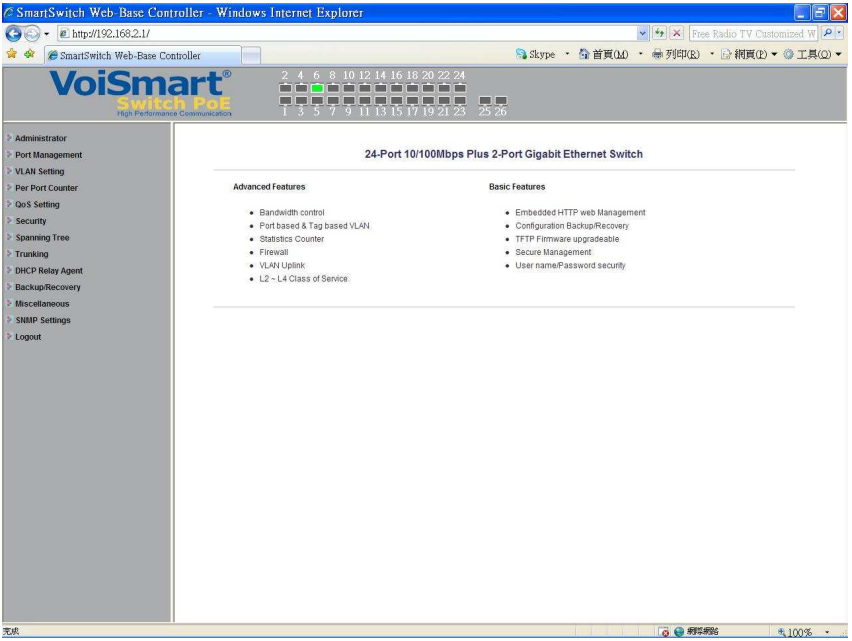
**Step 3:** Open the web browser (like IE…), and go to 192.168.2.1 Then you will see the login screen.



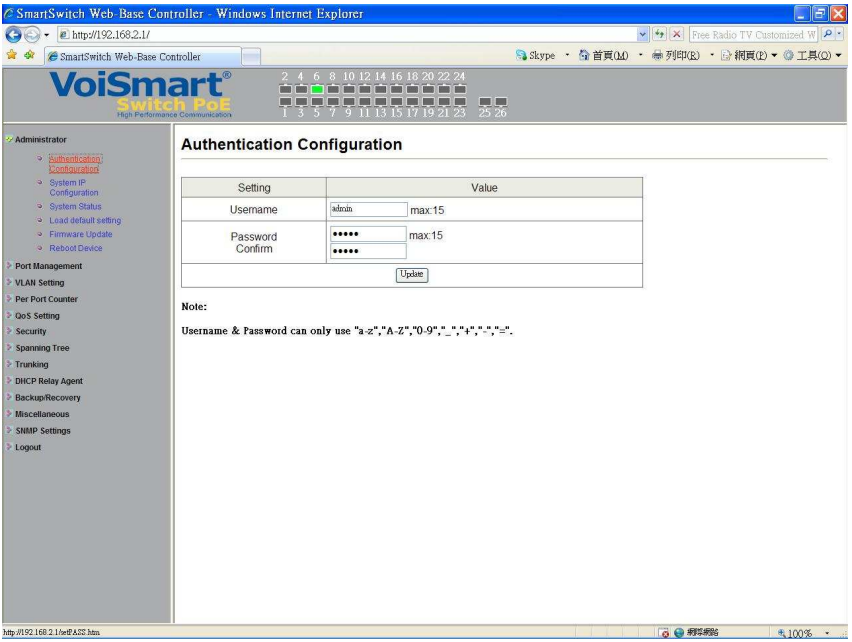

ID and the password: admin

**Step 4:** After the authentication procedure, the home page shows up. Select one of the configurations by clicking the icon.

- Administrator
- Port Management
- VLAN Setting
- Per Port Counter
- QoS Setting
- Security
- Spanning Tree
- Trunking
- Backup/Recovery
- Miscellaneous
- Logout



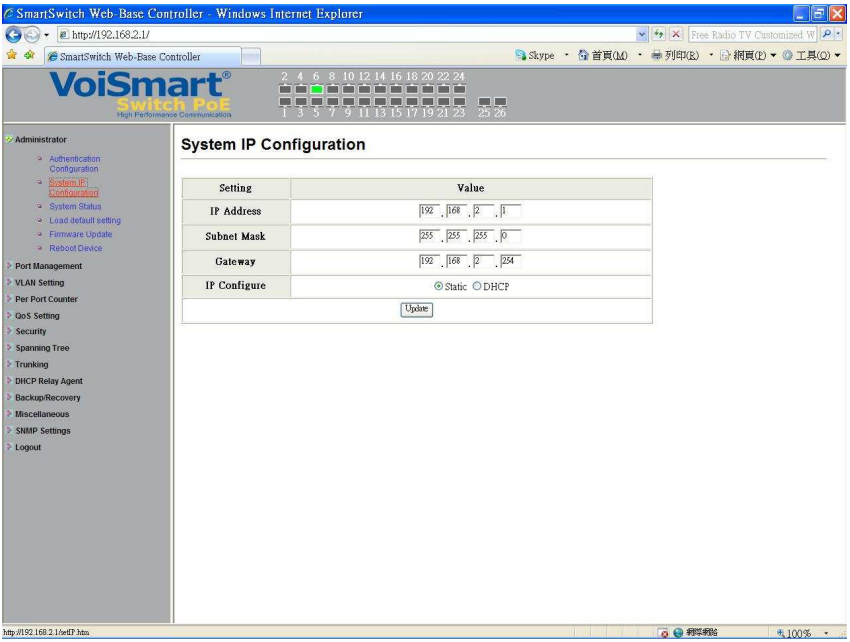
## Administrator: Authentication Configuration




1. Change the user name and the password.
2. Click “Update” to confirm the new change.

Now, you can use the new user name and the password.

## Administrator: System IP Configuration

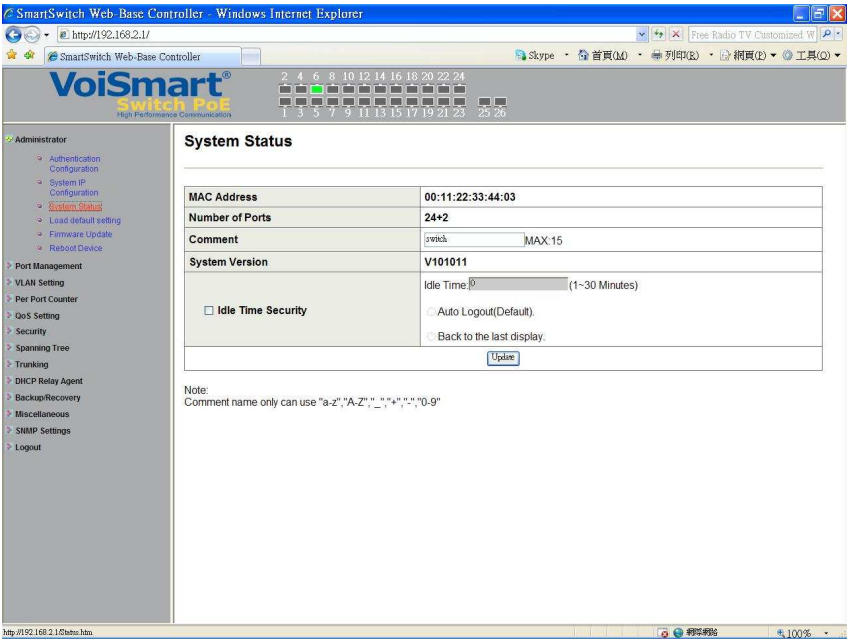



1. Change the IP address: type the new IP address or select DHCP IP configuration.

2. Click “Update” to confirm the new change.
   “Setting Process OK!!” will be shown on the screen.

Now, the setting of “System IP Configuration” is finished.

## Administrator: System Status



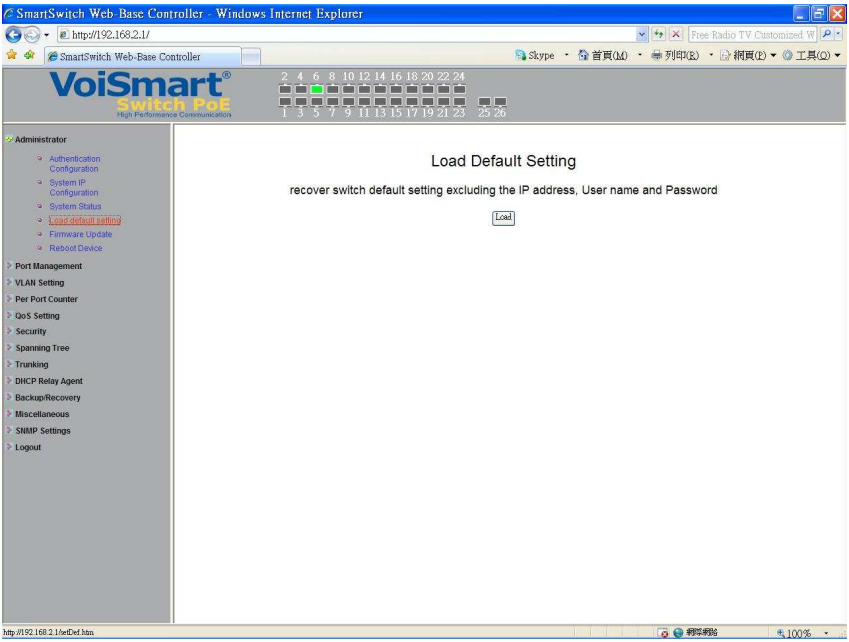

MAC address and system version will be shown on the screen.

1. Change the new comment of this switch by typing the new comment.

2. Click “Update” to confirm the new change.

Now, the setting of “System Status” is finished.

## Administrator: Load Default Setting

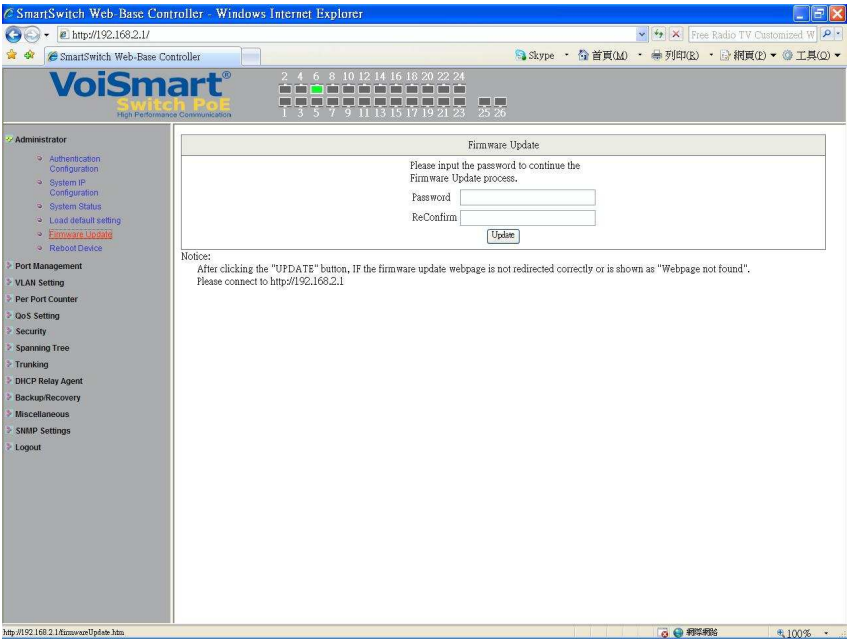



1. Click “Load” to back to the factory default setting.

**Note: Recover switch default setting excluding the IP address, User name and Password.

Now, the default is loaded.

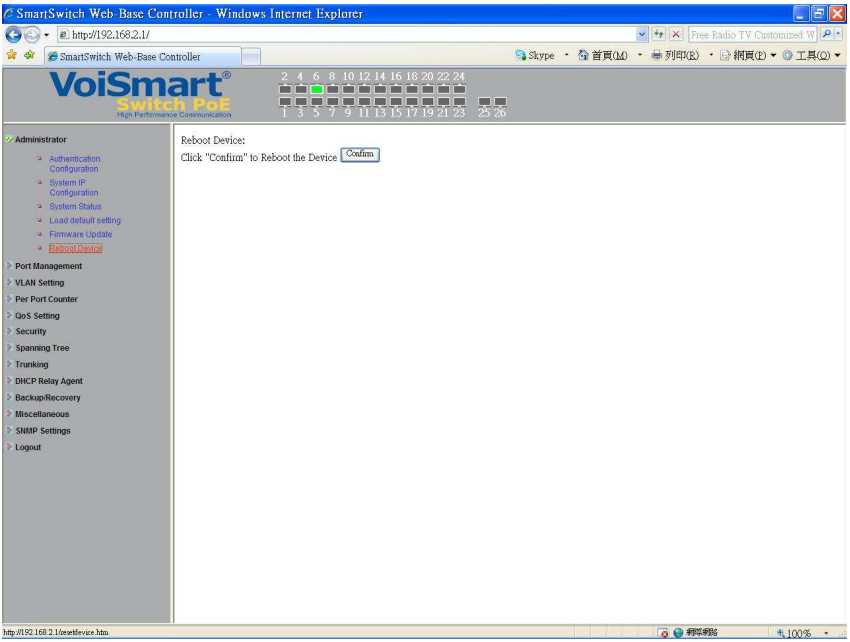
## Administrator: Firmware Update




Follow the instruction on the screen to update the new firmware.

Please contact with your sales agents to get the latest firmware information.

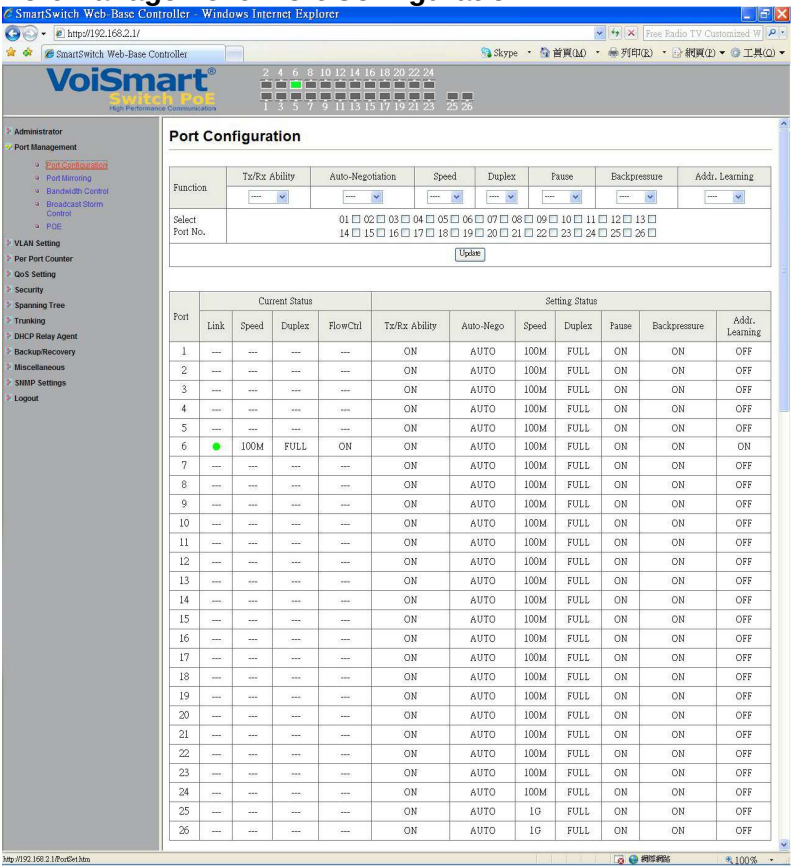
## Administrator: Reboot Device




1. Click “Confirm” to reboot the device.

Now, the setting of “Reboot Device” is finished.

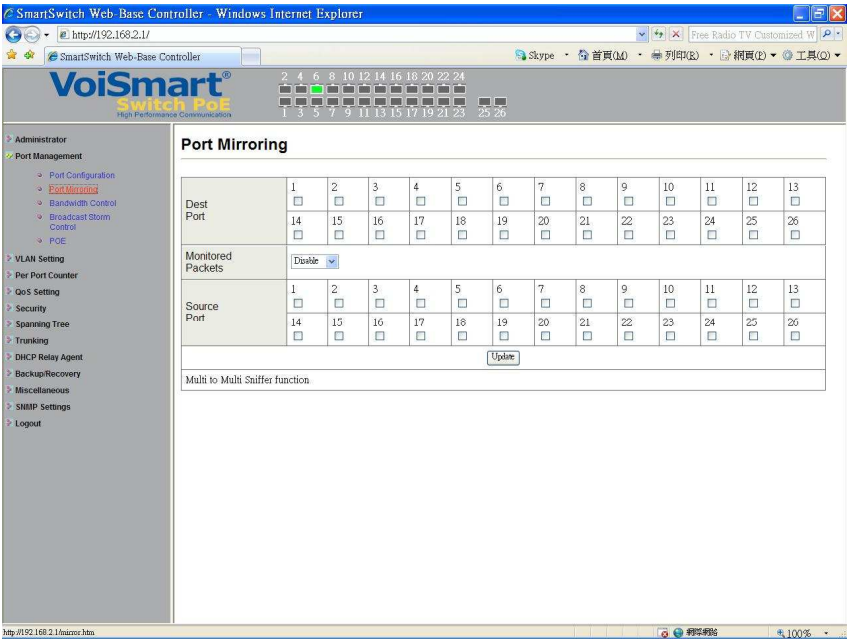
## Port Management: Port Configuration




Select the “Port No.” - configure the mode below:

1. “Auto” - enable/disable Auto-Negotiation.
2. “Speed” - 10M or 100M mode for the selected port.
3. “Duplex” - Full or Half-Duplex mode for the selected port.
4. “Pause” - enable/disable for the selected port.
5. “Backpressure” - enable/disable for the selected port.
6. “Tx Capability” - enable/disable for the selected port.
7. “Addr. Learning” - enable/disable for the selected port.

## Port Management: Port Mirroring

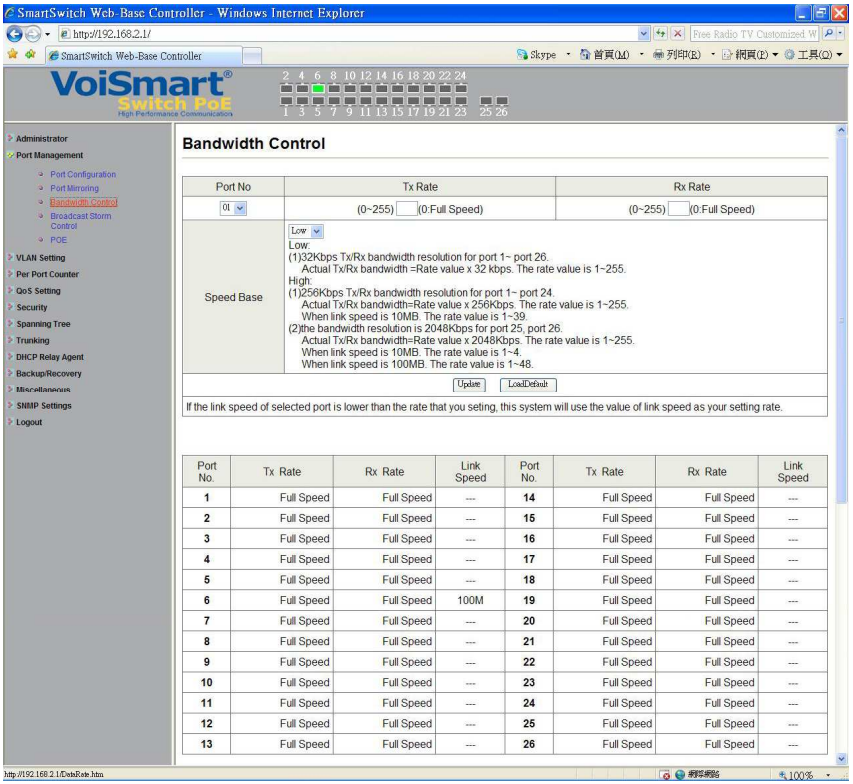



Port Mirroring is used to mirror traffic, RX, TX or TX&RX, from Source port to Destination port for analysis.

1. Select the Destination port: you can choose port 1 to port 26
2. Select the Source port: by clicking the checking box of the port.
3. Click “Update” to save the setting.

Now, the setting of “Port Mirroring” is finished.

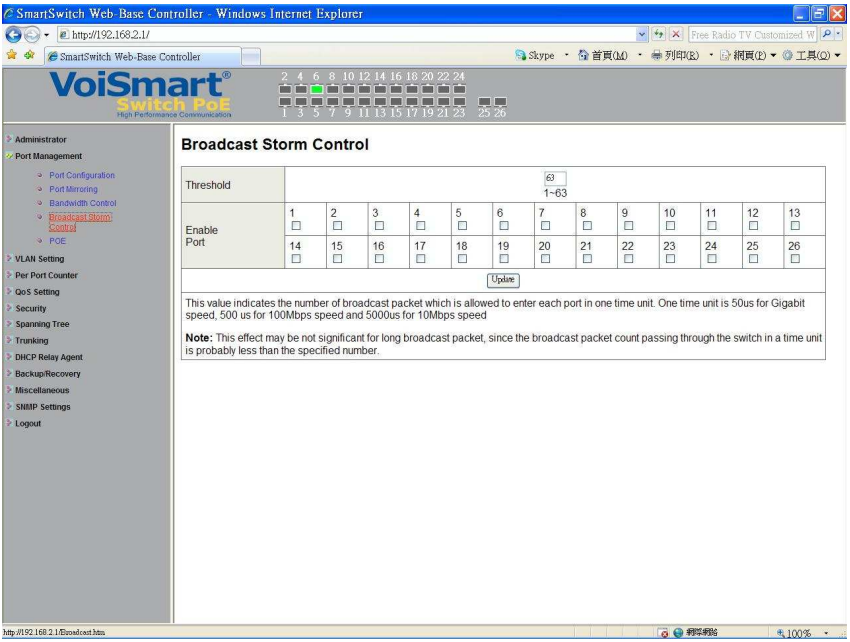
## Port Management: Bandwidth Control


SmartSwitch Web-Base Controller - Windows Internet Explorer
http://192.168.2.1/
SmartSwitch Web-Base Controller
VoiSmart®
Switch PoE
2 4 6 8 10 12 14 16 18 20 22 24
1 3 5 7 9 11 13 15 17 19 21 23 25 26
Administrator
Port Management
Port Configuration
Port Mirroring
Bandwidth Control
Broadcast Storm Control
POE
VLAN Setting
Per Port Counter
QoS Setting
Security
Spanning Tree
Trunking
DHCP Relay Agent
Backup/Recovery
Miscellaneous
SNMP Settings
Logout
Bandwidth Control
Port No
Tx Rate
Rx Rate
01
(0~255) (0:Full Speed)
(0~255) (0:Full Speed)
Speed Base
Low
Low:
(1)32Kbps Tx/Rx bandwidth resolution for port 1~ port 26.
Actual Tx/Rx bandwidth =Rate value x 32 kbps. The rate value is 1~255.
High:
(1)256Kbps Tx/Rx bandwidth resolution for port 1~ port 24.
Actual Tx/Rx bandwidth=Rate value x 256Kbps. The rate value is 1~255.
When link speed is 10MB. The rate value is 1~39.
(2)the bandwidth resolution is 2048Kbps for port 25, port 26.
Actual Tx/Rx bandwidth=Rate value x 2048Kbps. The rate value is 1~255.
When link speed is 10MB. The rate value is 1~4.
When link speed is 100MB. The rate value is 1~48.
Update
LoadDefault
If the link speed of selected port is lower than the rate that you seting, this system will use the value of link speed as your setting rate.
Port No. | Tx Rate | Rx Rate | Link Speed | Port No. | Tx Rate | Rx Rate | Link Speed
1 Full Speed Full Speed --- 14 Full Speed Full Speed ---
2 Full Speed Full Speed --- 15 Full Speed Full Speed ---
3 Full Speed Full Speed --- 16 Full Speed Full Speed ---
4 Full Speed Full Speed --- 17 Full Speed Full Speed ---
5 Full Speed Full Speed --- 18 Full Speed Full Speed ---
6 Full Speed Full Speed 100M 19 Full Speed Full Speed ---
7 Full Speed Full Speed --- 20 Full Speed Full Speed ---
8 Full Speed Full Speed --- 21 Full Speed Full Speed ---
9 Full Speed Full Speed --- 22 Full Speed Full Speed ---
10 Full Speed Full Speed --- 23 Full Speed Full Speed ---
11 Full Speed Full Speed --- 24 Full Speed Full Speed ---
12 Full Speed Full Speed --- 25 Full Speed Full Speed ---
13 Full Speed Full Speed --- 26 Full Speed Full Speed ---
http://192.168.2.1/DataRate.htm
100%

1. Select the “Port No.”: you can choose port 1 to port 26
2. “TX Rate Value”: set the transmission rate of the selected port. (0:Full speed; 1~255:Specified bandwidth.)
3. “RX Rate Value”: set the receiving rate of the selected port. (0: Full speed; 1~255: Specified bandwidth.)
4. “Resolution” : Low: 32 kbps / High: 512 kbps
5. Click “Update” to confirm the setting or “LoadDefault”.

Now, the setting of “Bandwidth Control” is finished.

## Port Management: Broadcast Storm Control


SmartSwitch Web-Base Controller - Windows Internet Explorer
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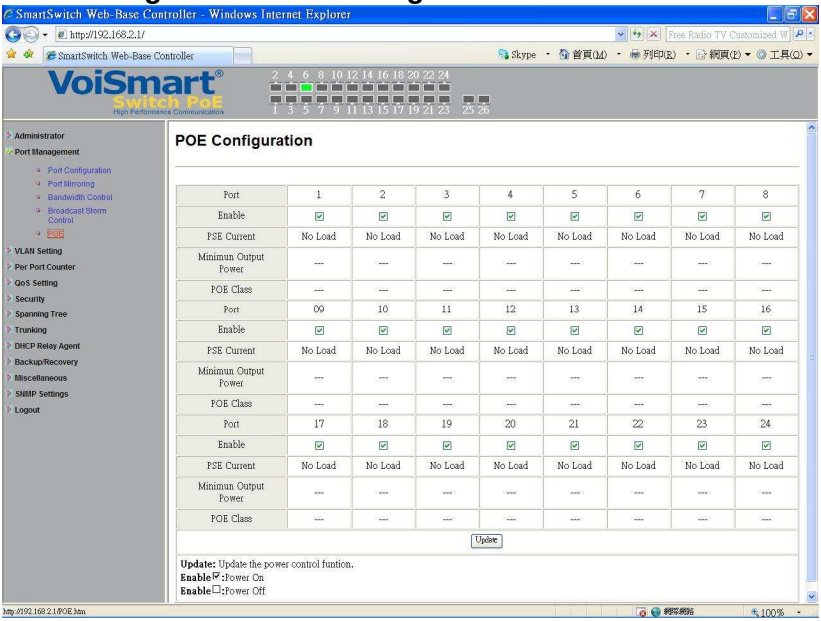
Per Port Counter
QoS Setting
Security
Spanning Tree
Trunking
DHCP Relay Agent
Backup/Recovery
Miscellaneous
SNMP Settings
Logout
Broadcast Storm Control
Threshold
63
1~63
Enable Port
Update
This value indicates the number of broadcast packet which is allowed to enter each port in one time unit. One time unit is 50us for Gigabit speed, 500 us for 100Mbps speed and 5000us for 10Mbps speed
Note: This effect may be not significant for long broadcast packet, since the broadcast packet count passing through the switch in a time unit is probably less than the specified number.

1. “Threshold” - Set the threshold from 1~63.
2. “Enable Port” - per port to define the status of broadcast packets.
3. Click “Update” to confirm the setting.

Now, the setting of “Broadcast Storm Control” is finished.

## Port Management: PoE Configuration




| Port | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Enable | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |
| PSE Current | No Load | No Load | No Load | No Load | No Load | No Load | No Load | No Load |
| Minimun Output Power | --- | --- | --- | --- | --- | --- | --- | --- |
| POE Class | --- | --- | --- | --- | --- | --- | --- | --- |
| Port | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Enable | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |
| PSE Current | No Load | No Load | No Load | No Load | No Load | No Load | No Load | No Load |
| Minimun Output Power | --- | --- | --- | --- | --- | --- | --- | --- |
| POE Class | --- | --- | --- | --- | --- | --- | --- | --- |
| Port | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Enable | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ | ☑ |
| PSE Current | No Load | No Load | No Load | No Load | No Load | No Load | No Load | No Load |
| Minimun Output Power | --- | --- | --- | --- | --- | --- | --- | --- |
| POE Class | --- | --- | --- | --- | --- | --- | --- | --- |

Update

**Update:** Update the power control funtion.
**Enable**☑:Power On
**Enable**☐:Power Off

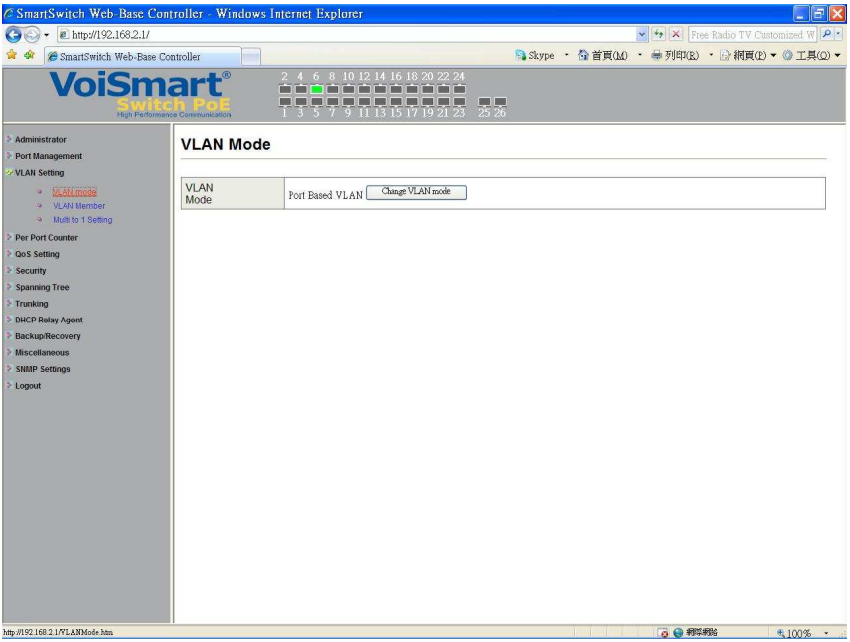
Remote access and monitor the attached PD (Powered Device) status by using Enable/Disable function.

****Total Power** of 24-port PSE/PoE: 184.8W

1. **Enable:** POE of the port is able to supply power to the attached PD (Powered Device)
2. **PSE Current & Minimum Output Power:** The status of the port current and minimum output power.
3. **POE class**: each POE port will detect the class of the attached PD (Powered Device)
4. Click “Update” to confirm and finish the setting.

Now, the setting of “PoE Configuration” is finished.

## VLAN Setting: VLAN Mode



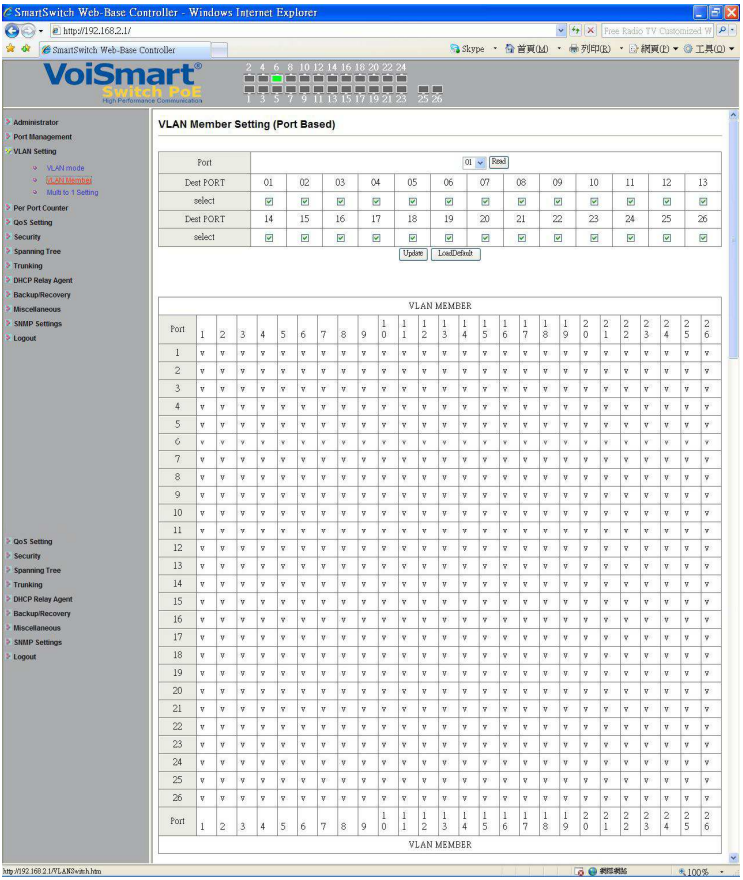

There are two VLAN modes : Port Based VLAN and Tagged VLAN.

Click “Change VLAN mode” to select the mode.

**If the Port Based VLAN function is enabled, Multi to 1 setting and tag Based VLAN will be disabled automatically.

Now, the setting of “VLAN Mode” is finished.

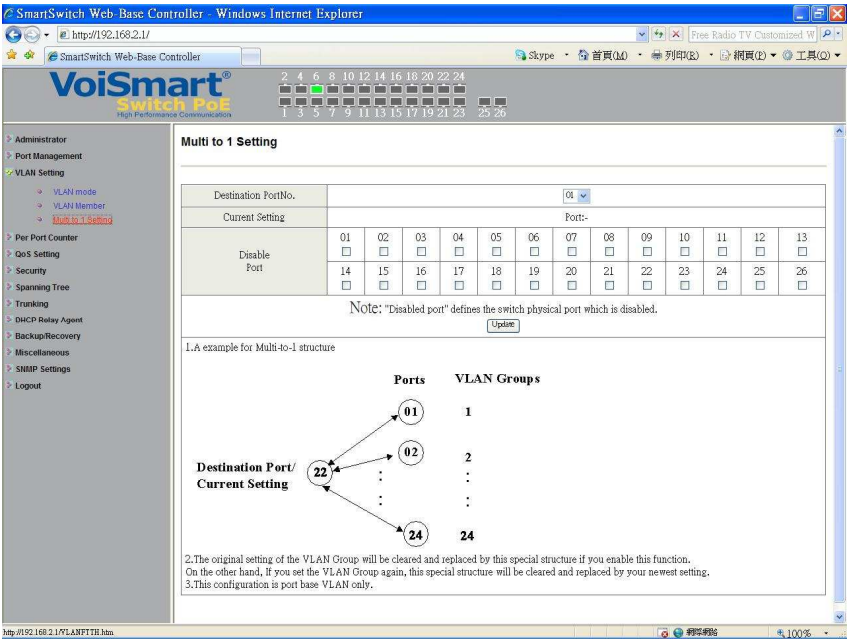
## VLAN Setting: VLAN Member Setting (Port Based)




You can select a port group.

1. Click the port numbers: which you want to put them into the selected VLAN group.
2. Click “Update” to confirm and finish the setting.
3. Click “LoadDefualt” to back to the original factory setting.

## VLAN Setting: Multi to 1 Setting

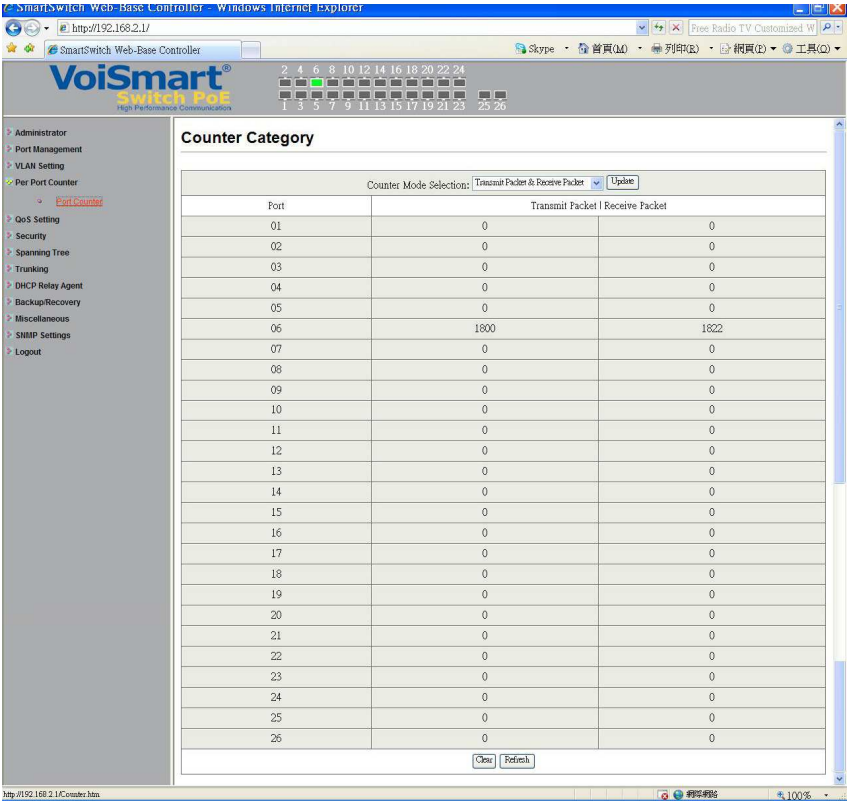



This is a special design for easily setting the switch VLAN into “VLAN Per Port“.

1. Choose “Destination Port No”.
2. Choose “Disable Port”
3. “Disable Port” – choose the port which you don’t want to use
4. Click “Update” to confirm and finish the setting.

After this setting, all ports can only connect to destination ports.

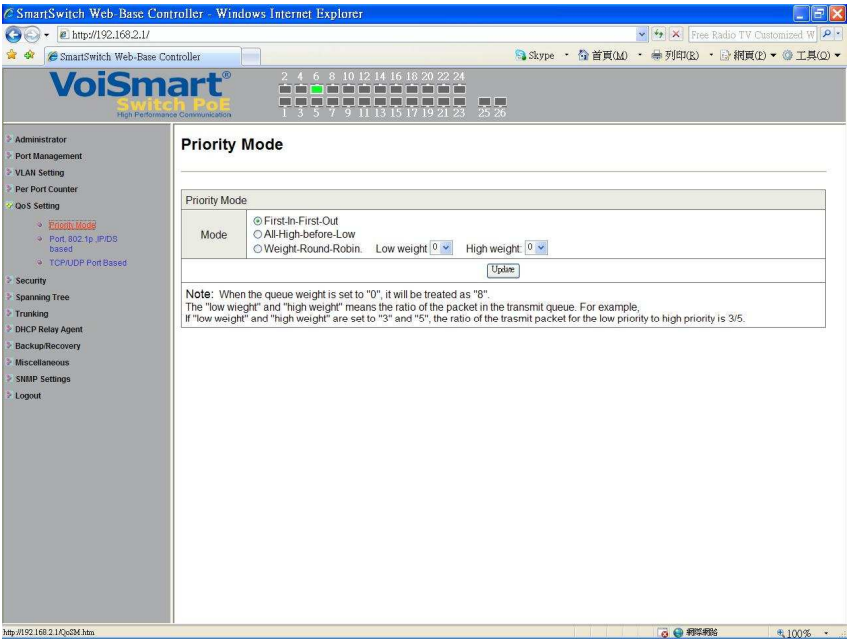
## Per Port Counter: Counter Category




You can read the transmitting and receiving packet of the connecting port.

Click “Refresh” or “Clear” the data.

## QoS Setting: Priority Mode




There are three Priority Modes to select.

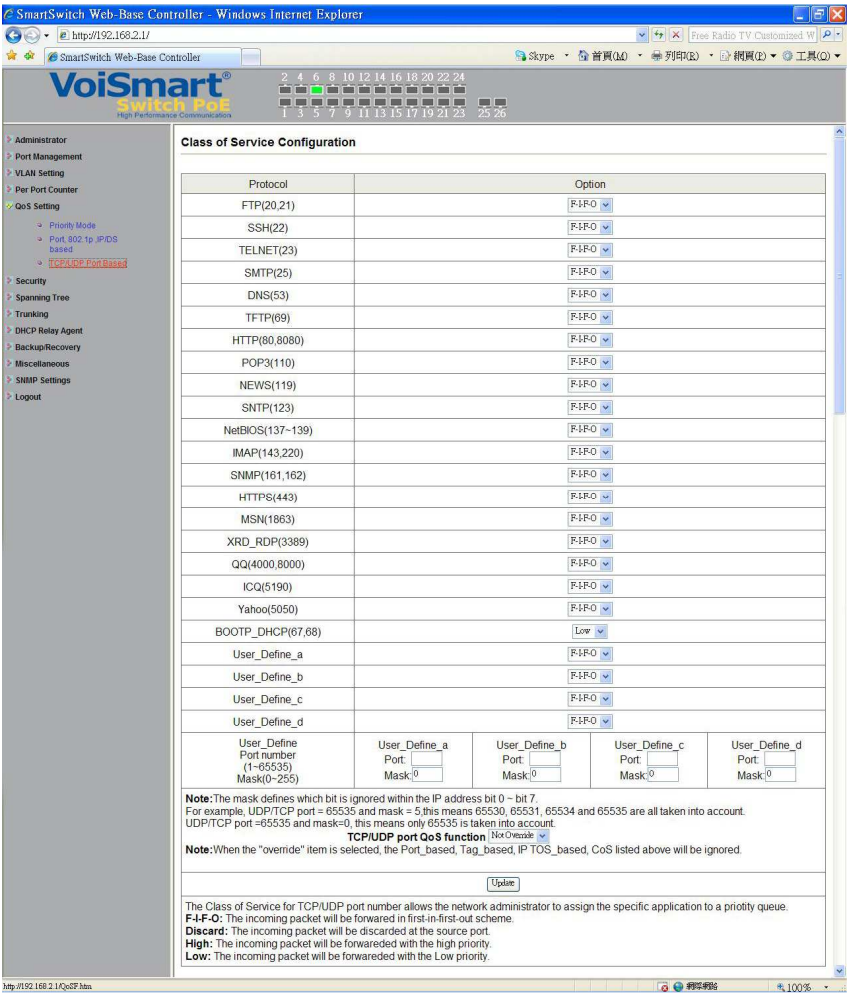
1. “First-in-First-Out” - the first receiving packet will be firstly transmitted.

2. “All-High-before-Low” – All packets will be assigned to either Q2(high) piority queue or Q1(low) priority queue.

3. “Weight-Round-Robin” - set the ratio of the transmitting packet for the low priority to high priority.

4. Click “Update” to confirm and finish the setting.

## QoS Setting: Class of Service Configuration




You can set QoS mode of per port by different bases.

TCP/UDP > TP TPS/DS > 802.1P > Physical port

1. "TCP/UDP Port" – effective for the selected physical port only. "Drop" option is the global setting for all physical ports. The packet queue will be transferred based on the number of "Weight-Round-Robin" on **QoS Setting: Priority Mode.**

** Weight-Round-Robin – Q1~Q8
**"Drop" - packets will be dropped.

2. "Priority Setting" - It means the packets with special IP will be firstly transmitted.

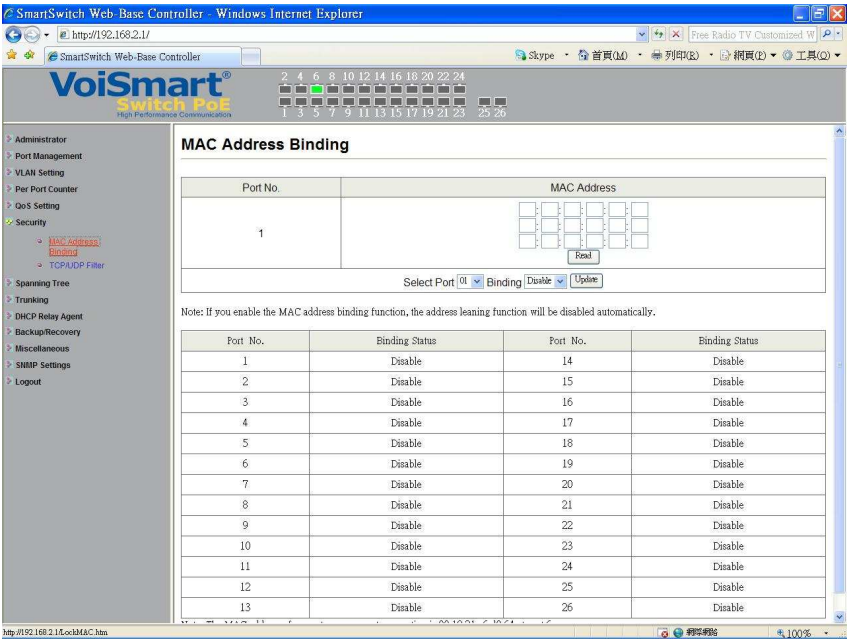
3. "802.1p" – Priority mapping table as the screen shown.

4. "Physical port" - you can select the port which you want to configure as Q1~Q8 priority.

5. Click "Update" to confirm and finish the setting.

Now, the setting of "Class of Service" is finished.

## Security: MAC Address Filter




Set special MAC address to activate on the selected port

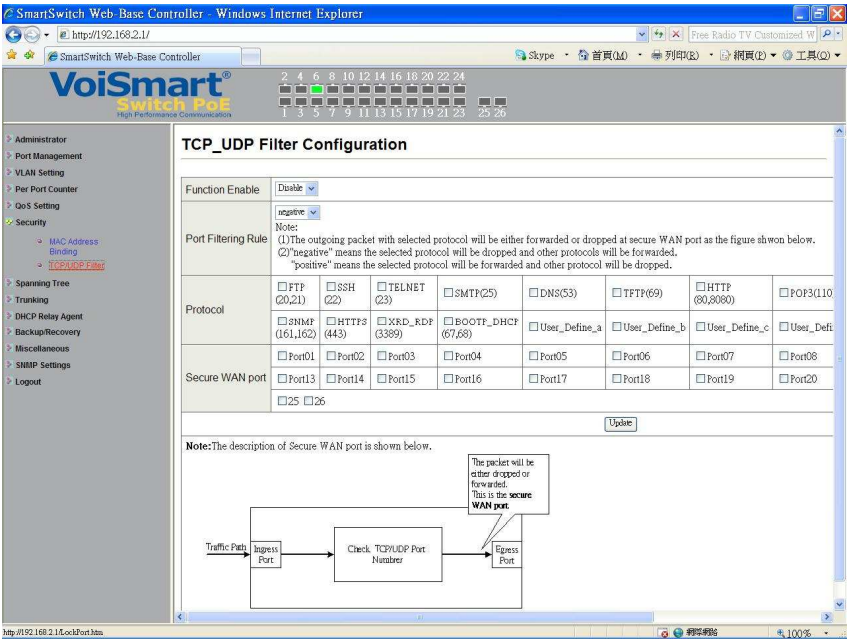
1. Choose “Select Port” – port 1~26

2. “Binding” – “Enable”: allow the packet with the specified source MAC address to enter this port.

3. Click “Update” to confirm and finish the setting.

Now, the setting of “MAC Address Filter” is finished.

## Security: TCP_UDP Filter Configuration




You can enable or disable this function of per port.

If the “Function Enable” is “Enable”, please kindly check the following setting:

1. “Port Filtering Rule” –

   “Deny”: the outgoing packets to the selected port with selected protocol will be dropped and other protocols will be forwarded.
   “Allow”: the selected protocol will be forwarded and other protocol will be dropped.

2. “Secure Port” – choose secure ports which you want.

   **Note 1:
   a. The secure WAN port should be set at the physical port which is connected to the server.
   b. Once this function is enabled, the switch will check the destination TCP/UTP port number at the outgoing direction of the secure WAN port.

   If the condition matches, this packet will be dropped or forwarded.

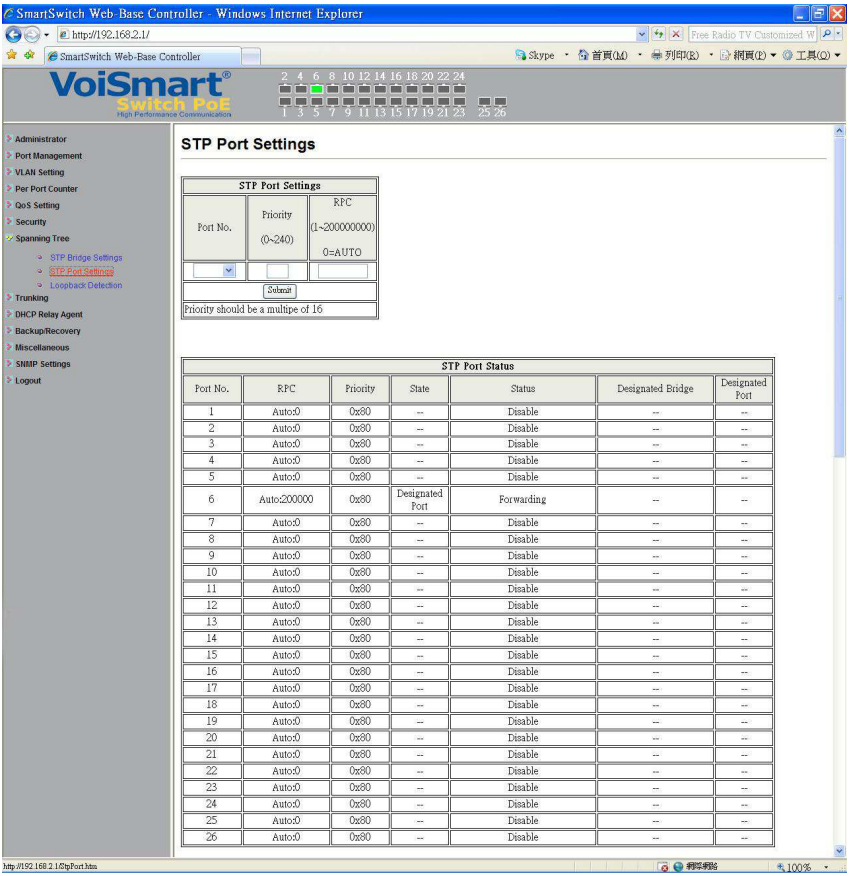
   **Note 2: The description of Secure WAN port is shown on the bottom of this screen.

3. “Protocol” – choose protocols which you want.

4. Click “Update” to confirm and finish the setting.

Now, the setting of “TCP/UDP Filter Configuration” is finished.

## Spanning Tree: STP Bridge Settings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Spanning Tree
STP Bridge Settings
STP Port Settings
Loopback Detection
Trunking
DHCP Relay Agent
Backup/Recovery
Miscellaneous
SNMP Settings
Logout
STP Port Settings
STP Port Settings
Port No.
Priority (0~240)
RPC (1~200000000) 0=AUTO
Submit
Priority should be a multipe of 16
STP Port Status
Port No. | RPC | Priority | State | Status | Designated Bridge | Designated Port
1 | Auto:0 | 0x80 | -- | Disable | -- | --
2 | Auto:0 | 0x80 | -- | Disable | -- | --
3 | Auto:0 | 0x80 | -- | Disable | -- | --
4 | Auto:0 | 0x80 | -- | Disable | -- | --
5 | Auto:0 | 0x80 | -- | Disable | -- | --
6 | Auto:200000 | 0x80 | Designated Port | Forwarding | -- | --
7 | Auto:0 | 0x80 | -- | Disable | -- | --
8 | Auto:0 | 0x80 | -- | Disable | -- | --
9 | Auto:0 | 0x80 | -- | Disable | -- | --
10 | Auto:0 | 0x80 | -- | Disable | -- | --
11 | Auto:0 | 0x80 | -- | Disable | -- | --
12 | Auto:0 | 0x80 | -- | Disable | -- | --
13 | Auto:0 | 0x80 | -- | Disable | -- | --
14 | Auto:0 | 0x80 | -- | Disable | -- | --
15 | Auto:0 | 0x80 | -- | Disable | -- | --
16 | Auto:0 | 0x80 | -- | Disable | -- | --
17 | Auto:0 | 0x80 | -- | Disable | -- | --
18 | Auto:0 | 0x80 | -- | Disable | -- | --
19 | Auto:0 | 0x80 | -- | Disable | -- | --
20 | Auto:0 | 0x80 | -- | Disable | -- | --
21 | Auto:0 | 0x80 | -- | Disable | -- | --
22 | Auto:0 | 0x80 | -- | Disable | -- | --
23 | Auto:0 | 0x80 | -- | Disable | -- | --
24 | Auto:0 | 0x80 | -- | Disable | -- | --
25 | Auto:0 | 0x80 | -- | Disable | -- | --
26 | Auto:0 | 0x80 | -- | Disable | -- | --

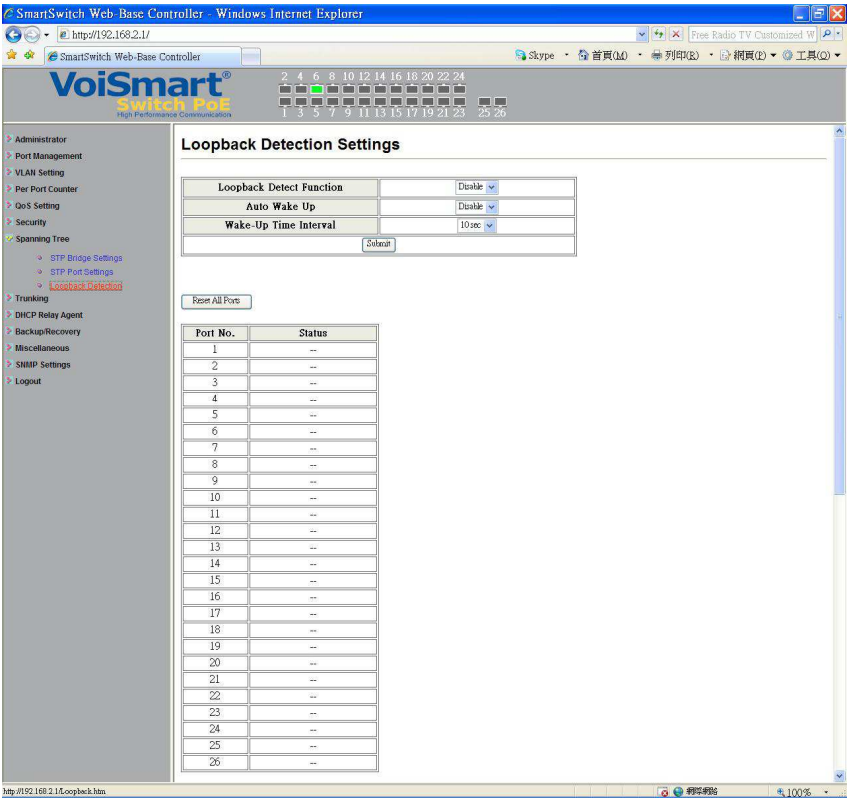
This setting is to avoid the loop network.

1. Select the “STP Mode”- choose “Disable”, “STP” or “RSTP”
2. Set the “Bridge Priority” – Set the priority of the Bridge
3. Set the period of “Hello Time” packet – Provides the time period between root bridge configuration messages.

4. Set the “Max Age” – Indicates when the current configuration message should be deleted.
5. Set the “Forward Delay” time – Provides the length of time that bridges should wait before transitioning to a new state after a topology change. (If a bridge transitions too soon, not all network links might be ready to change their state, and loops can result.)
6. Click “Update” to confirm and finish the setting.

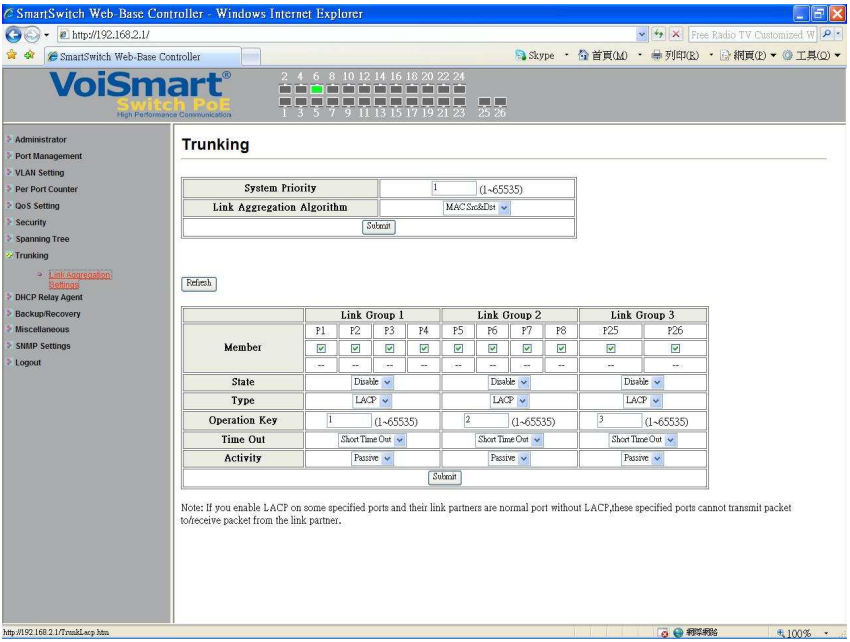
Now, the setting of “STP Bridge Settings” is finished.

## Spanning Tree: STP Port Settings



1. Choose “Port No.” : Port 1 ~ Port 26
2. Choose “Priority”: 0~ 240
3. “RPC” = Root Path Cost: 0 = AUTO. When the loop is found, the STP/RSTP will calculate the cost of its path.

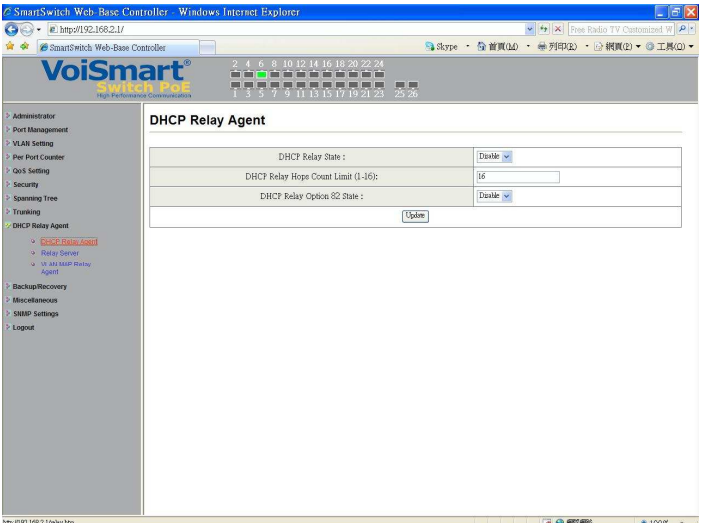
## Trunking: Link Aggregation Settings

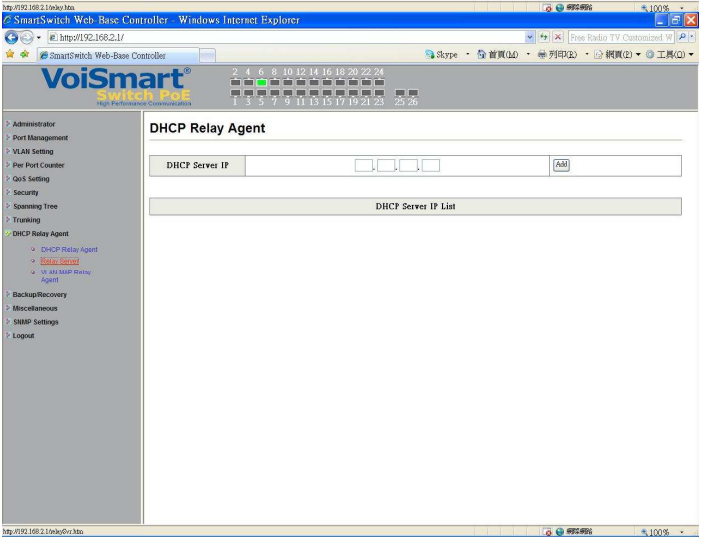


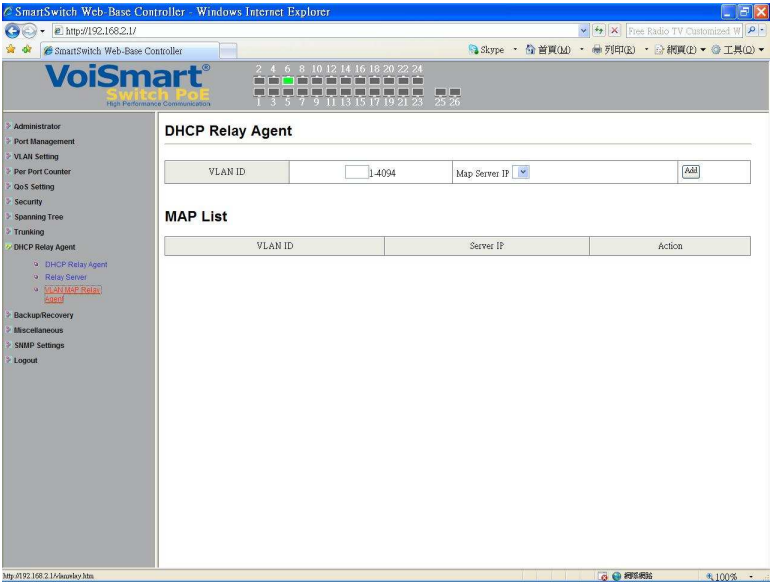

There are two groups to choose and max. for each group is 4 ports.
**Link Group 3: combo port - Port 25/Port 26

Click “Submit” to confirm and finish the setting.
“State” – Enable / Disable
“Type” – LACP/ Static
“Activity” – Active/Passive: **Both switches use “LACP” to configure the Trunk, at least one of them should be “Active”.**

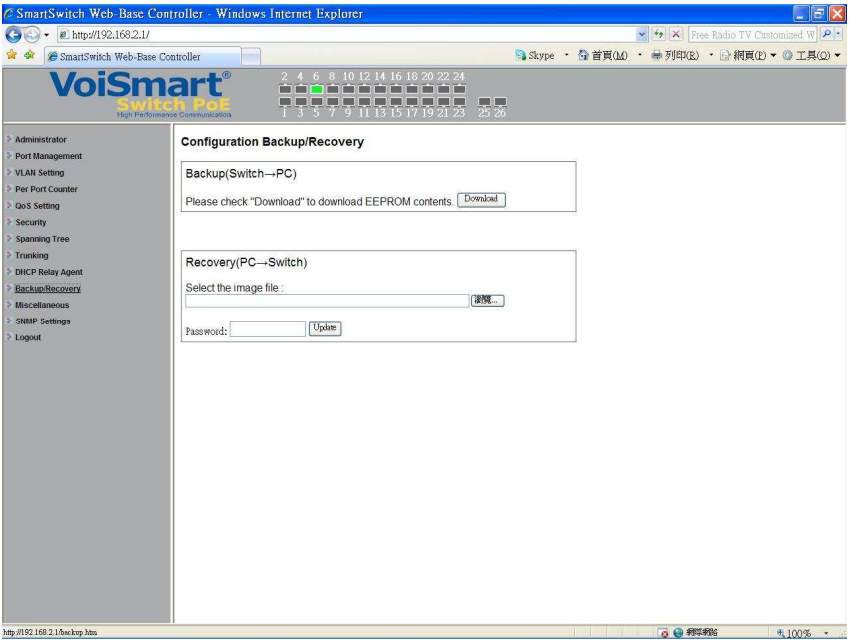
## DHCP Relay Agent:




SmartSwitch Web-Base Controller - Windows Internet Explorer
http://192.168.2.1/
SmartSwitch Web-Base Controller
VoiSmart®
Switch PoE
Administrator
Port Management
VLAN Setting
Per Port Counter
QoS Setting
Security
Spanning Tree
Trunking
DHCP Relay Agent
DHCP Relay Agent
Relay Server
VLAN MAP Relay Agent
Backup/Recovery
Miscellaneous
SNMP Settings
Logout
DHCP Relay Agent
VLAN ID
1-4094
Map Server IP
Add
MAP List
VLAN ID
Server IP
Action

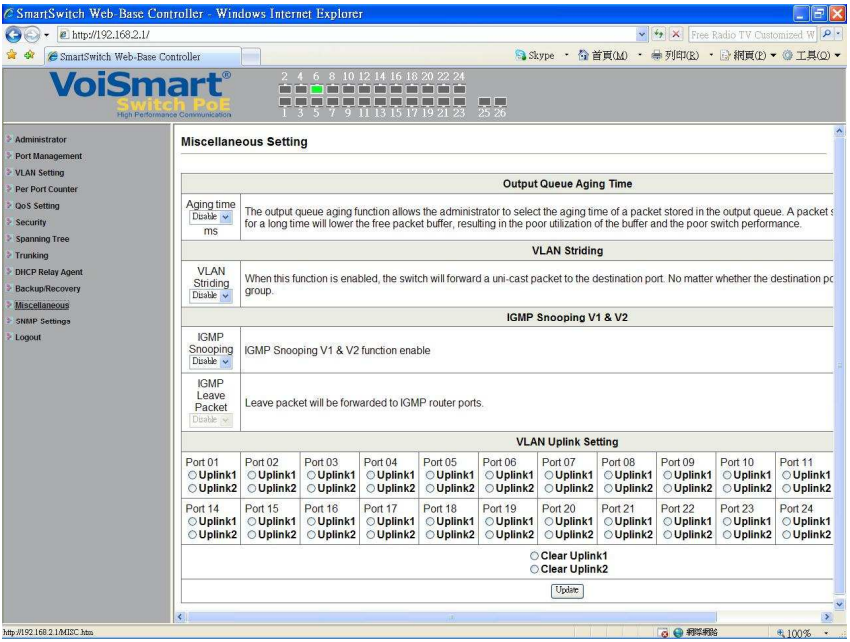
## Backup/Recovery




Follow the instruction on the screen to update the original setting.

"Backup" - Click "Download" to confirm the setting.
"Recovery" – select a file and key in the password → Click "Update" to confirm the setting.

## Miscellaneous: Miscellaneous Setting




1. “Output Queue Aging Time” - You can set queue aging time into different milliseconds or disable this function.

2. VLAN Striding” – You can enable/disable this function.

3. “IGMP Snooping V1 & V2” – You can enable/disable this function.

4. “VLAN Uplink Setting” – Set “uplink1 or uplink2” or “Clear uplink1” or “Clear uplink2”

5. Click “Update” to confirm and finish the setting.

## Logout: You can click “Logout” to logout.